DOCUMENT RESUME

ED 173 635 CE 022 253

TITLE	Developmental Studies for Occupational Students: Post-Secondary Programs.
INSTITUTION	State Univ. of New York, Ithaca. Coll. of Agriculture and Life Sciences at Cornell Univ.
SPONS AGENCY	New York State Education Dept., Albany. Div. of Occupational Education Instruction.; New York State Education Dept. Albany, Grants Administration Unit.; Office of Education (DHEW), Washington, D.C.
REPORT NO	RP-77-3
PUB DATE	Nov 77
GRANT	VEA-TQ-2-526
NOTE	146p.; For related documents see CE 022 254 and ED 152 344; Parts may not reproduce clearly
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Academic Achievement; Admission Criteria; Affective Behavior; Cognitive Ability; College Programs; Cost Effectiveness; *Developmental Programs; Diagnostic Teaching; Educational Diagnosis; Educational Facilities; *Individual Instruction; Performance Specifications; Personnel Evaluation; Postsecondary Education; Predictor Variables; Program Development; Program Evaluation; Staff Improvement; State Surveys; Student Evaluation; Student Recruitment; Success Factors; Teacher Qualifications; *Vocational Education

ABSTRACT

Based on information gathered from a statewide survey and a study of six college programs, this series of monographs presents findings and suggested applications for postsecondary development programs for occupational education students. The first of nine monographs contains an overview of research results. The results are based on an examination of cognitive and affective student variables and environmental and program variables. The remaining monographs, 2 through 9, contain the following: (2) discussion of developmental student recruitment and selection; (3) review of diagnostic and prescriptive procedures in the light of individual and group concerns; (4) examination of factors impinging on program development particularly for reading, writing, and study skills components; (5) presentation of considerations related to staffing and facilities; (6) exploration of comprehensive (student, staff, and program-centered outcomes) evaluation standards; (7) inspection of factors involved in program cost analysis; (8) presentation of an approach to staff development; and (9) summarization of study findings and follow-up implications. Most of the monographs are formatted as follows: problems and issues, recommendations and implications, potential impact, and guide questions for considering program standards. (CSS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED173635
CE 022 253

DEVELOPMENTAL STUDIES FOR OCCUPATIONAL STUDENTS: POST-SECONDARY PROGRAMS

Cornell Institute for Research and Development
in Occupational and Continuing Education
Department of Education
New York State College of Agriculture
and Life Sciences
Cornell University
Ithaca, New York

in cooperation with:

Office of Occupational Education
and
Grants Administration Unit
New York State Education Department
Albany, New York

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Miller

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Research Publication 77-3
November 1977

DEVELOPMENTAL STUDIES FOR OCCUPATIONAL STUDENTS: POST-SECONDARY PROGRAMS

VEA-TQ-2-526

PROJECT STAFF

LaVerna M. Fadale, Project Director
Gene M. Winter, Associate Director, CIOE
Anne Russ, Research Assistant
Roger Johanson, Programmer
Carol Adomiak, Secretary

Funds for this project were provided by
Section 122(a) of the
Vocational Education Amendments of 1968
administered by the
New York State Education Department

ADVISORY COMMITTEE

Virginia Abrahamsen
Delhi Agricultural and Technical College
Delhi, New York

Stephen H. Adolphus
New York State Education Department
Albany, New York

Nancy A. Hoddick
Albany, New York

George Howard
State University of New York
Albany, New York

David E. Peters
Genesee Community College
Batavia, New York

Roger Wingett
Jamestown Community College
Jamestown, New York

PREFACE

This monograph series is based on an applied research project focusing on post-secondary developmental programs for occupational education students. Information has been collected in two research cycles, a state-wide survey and an in-depth study of representative samples of local programs. At the six two-year colleges that served as research sites during the second phase, developmental program staff members worked closely with project staff providing leadership, support, and assistance in all phases of the research effort.

The monographs represent an attempt to use the research findings, summarized in Monograph #1 "Overview", as the basis of targeted discussions and recommendations. Although somewhat subjective, this format may be more useful to local program staff than a traditional research report. Problems and issues, recommendations and potential impact are addressed by topical area:

Monograph #1:	Overview: Research Summary
Monograph #2:	Recruitment and Selection
Monograph #3:	Diagnosis and Prescription
Monograph #4:	Programming
Monograph #5:	Staffing and Facilities
Monograph #6:	Evaluation

The project was supported through funding from the Grants Administration Unit, VEA #TQ-2-526, New York State Education Department. The effort was made possible because of the cooperation and support of the individuals and their institutions identified on the following page. On behalf of the project staff we wish to express our sincere appreciation for their efforts.

A share of any credit rightfully belongs to those who have contributed to the activity but project staff accept full responsibility for any perceived shortcomings.

Dr. LaVerna M. Fadale
Project Director
Developmental Studies

Dr. Gene M. Winter
Associate Director
Cornell Institute for Research and Development in Occupational and Continuing Education

COOPERATING SITES

Alfred Agricultural and Technical College
Alfred, New York 14802

Contact Person:	Grace Barton Rosemary Lanshe
Cooperating Staff:	Susan Earl Trudi Schwert

Borough of Manhattan Community College
New York, New York 10028

Contact Person:	Vivian Gaman
Cooperating Staff:	Genaro M. LaChica

Delhi Agricultural and Technical College
Delhi, New York 13753

Contact Person:	Virginia Abrahamsen
Cooperating Staff:	Barbara Doubleday Anthony Hunter Kathy Martin

Jefferson Community College
Watertown, New York 13601

Contact Person: Carol Scanlon

Cooperating Staff: Ted Hogancamp
Janet Johnson
Dave Moore

Junior College of Albany
Albany, New York 12208

Contact Person: Russell Wise

Cooperating Staff: Jeff Pofit
Carol Benjamin
Nancy Call
Charles DeMatteo

Ulster County Community College
Stone Ridge, New York 12484

Contact Person: David L. Bartlett
Larry Borzumato

Cooperating Staff: John Hjelmeland
Jim Quirk

Monograph #1

OVERVIEW:
RESEARCH RESULTS

Developmental Studies

© LaVerna M. Fadale 1977
ALL RIGHTS RESERVED

MONOGRAPH #1: OVERVIEW - RESEARCH RESULTS

Introduction

It is important to continually recognize that for a variety of reasons developmental studies programs for occupational education students vary widely from college to college. Most differences stem from judgments of professional staff during the historical evolution of programs rather than the acceptance of a particular educational philosophy. The term developmental studies has different meanings among staff members who work in the program area. Remediation is involved, as is updating or reorientation to instructional kinds of experiences. Across colleges programs are both a total semester's work and segmented. Some aspects may even be termed compensatory. Students are older and younger, disadvantaged and non-disadvantaged. The general goal of developmental studies appears to be one of providing additional help for students that will enhance the possibility of success in their chosen field of study. The operational definition used in this project is:

> Developmental studies programs are organized educational efforts providing a range of learning experiences intended to ameliorate educational skill and attitude deficiencies of students.

It should be recognized that these kinds of programs are designed for a small number of students. Indeed they constitute a group of students whose participation in college is questioned by many professional educators. They believe the role of higher education has been and should continue to be selective. At the same time, however, the mission of the two-year college is sufficiently unique that it is completely justified in providing some kinds of assistance to students in the upgrading of basic skills. The dimension that no program can guarantee is that of

causing a process of learning to occur. That the students must do through involvement and motivation.

Guide questions for program standards are listed at the conclusion of each topic in order to suggest local standards for programs. The publication is based on research data which are summarized in this overview, the first monograph.

This monograph series consists of topical areas critical to postsecondary programs in developmental studies for occupational students. The first, this overview, provides a basis of understanding and background to the other monographs by summarizing the research outcomes. The purpose of the publication is to serve as a resource for staff members involved in developmental studies programs as well as for two-year colleges that are reviewing their current program or undertaking some kinds of developmental efforts.

The first cycle of research consisted of a statewide survey of developmental programs at two-year institutions that resulted in the publication, "Overview-Developmental Studies for Occupational Students - A Sourcebook for Post-Secondary Programs".[1] Working with cooperating staff at six New York State two-year colleges, the emphasis of the second cycle has been with student characteristics relative to success and their implications to programming. A detailed report of the process and outcomes is presented in "Post-Secondary Developmental Studies Programs For Occupational Students: An Impact Study", Research Report, September, 1977.[2]

Student-Centered Factors

The statewide survey (1976) found program designs do differ among institutions but within these differences the common concern is for cognitive and affective student basic skills. Students with these and other needs have been broadly termed non-traditional. Student differences in age, perspective, needs and motives constitute diversity for more than geographical location, institutional size or program approach. The success of these students emerges from a combination of basic skills and drive or motivation to succeed: The skill component is largely made up of academic survival skills. Drive or motivation is a collection of intangibles that admittedly are difficult to identify, and which vary among students. The non-traditional students who constitute a large proportion of clientele in developmental programs tend to be older than traditional two-year college students. Their motive for returning to college is often economic, a seeking to upgrade employability skills and status. The availability of monetary support through social and educational agencies is instrumental in making college a feasible alternative for many who previously would not have considered it. These older returning students, many of whom are women, value and want developmental program offerings. They perceive them as a desirable orientation, an entry phase or refresher to academic pursuits which provides both attitudinal and skill development.

Somewhat conversely, younger students, those entering directly from high school into developmental offerings, generally do not perceive these programs as critical to their pursuits. Rather, some view developmental programs as repetitions of high school studies and often exhibit indifference toward what they perceive as non-college

studies. A minority of these students also express disappointment or dismay for being judged marginal before the fact.

The effectiveness of any program cannot be determined without examination of its impact at the student level. There must be identification of student variables active in a situation. As in most instructional programs, there are groups of variables that, in different situations with different students, interact in diverse ways. There is no one best set of conditions that is universally true. This research has sought generalities that could be seen as strong clues for local verification in the specific program and student context.

Student-centered variables can be divided into two major groups: cognitive or skill and drive or affective. Either set can compensate for deficiencies in the other. Programs generally focus on academic skills but motivation is seen as important if not primary for some students. One must apply effort to increase skills or, more basic, one must have the will to apply existing skills. In many cases, a student is in fact judged on an application of effort more than the quality of the interim product of the effort with the perspective that if a student will develop the habit of continuing to try, the chances for success in later program studies are significantly increased.

Implications of Findings

Cognitive and Affective Variables - Students. The success or non-success of developmental students has been defined as the academic eligibility to continue a program of studies or to consciously decide to change program or college plans. Grade point average and academic status served as success criteria at the conclusion of the academic year for developmental students participating in the study. For fall students, these criteria represented two semesters of college work and for spring students, one semester. A percentage summary of academic status of these students describes the proportion of successful and non-successful students included in the sample:

Fall Entrants	Spring Entrants
72.7% academic success	60.2% academic success
24.6% academic failure	34.1% academic failure
2.7% withdrew	5.7% withdrew

In determination of factors characteristic of successful developmental students, the affective or attitudinal aspect was examined by a number of techniques. Data from the SRA Inventories[3] indicate that successful developmental students held some different values than non-successful students. Successful students strongly valued goal orientation and recognition and to a lesser degree independence. In some analyses leadership and support were also significantly valued by successful students. Variety was consistently valued less by the more successful students. Conformity was identified in a strong but negative relationship to success criteria. There was some tendency to value achievement, benevolence, decisiveness and orderliness by successful students.

The consistency found in the analyses for the values of goal orientation, variety, conformity and recognition in relation to success suggest these value factors, as measured by the instruments, are important variables within the affective domain.

Commitment emerged as a significant factor. The measures for commitment to career, college and/or program were integrated into the questionnaire and interview schedule. Successful students tended to have firm career goals and the choice of their program and college tended to be based on personal choice rather than due to external influences. A personal commitment to long-range and short-term goals was in evidence by successful students. Many of these students were clear in their intentions and this clarity was often based on experience.

Successful students approach the college experience positively. They find their needs being met by both institution and staff. With a career or personal goal as a guide or benchmark, these students seek and relate to those people and activities which aid them along their intended course of study and/or career goal.

An indicator of cognitive skill, the reading stanine, was collected at the end of the academic year for participating students. The reading stanine was a strong positive factor related to academic success. Congruently, successful students identified reading skills as an important area of need.

Faculty predictions were highly correlated with student success. Based on categories such as motivation, inquisitiveness, attendance, and goal orientation, faculty demonstrated a consistency in predicting the success of students prior to mid-term. These predictions emerged as the most consistent variable throughout the investigation.

Environment and Program Variables. Environmental variables such as institutional response, geographical location, or student background appear to be less critical to success than specific program components. Developmental programs with greatest impact were those with sufficient flexibility to allow students to sense individual attention. Maximum individualization tends to occur when a skill center or area staffed with qualified professionals is central to the program with courses and supportive services eminating from that locus.

The term "center" is used in the broadest sense and denotes a "base of operation". It is more a psychological construct than a physical factor. It provides the central structure necessary for not only formal skill instruction but for attention to individual concerns or problems whether skill-oriented or attitudinal. The "center" or base of operation is both a learning unit and an access to assistance throughout the college years. Individual courses are time oriented and are not available beyond the scheduled semester. The physical location of the center of developmental activity should be within the natural flow of student traffic but more important is an open accepting attitude of the staff who work there.

The utility of developmental programs increases with the extent of professional supportive interaction between developmental staff and other faculty members. The presence of interaction results in increased respect and acceptance of the program and its contribution to student needs -- often relative to subject content and the necessary skills for academic survival. Peer acceptance and recommendation tends to result in more students taking advantage of developmental offerings.

The group of students that are termed non-traditional increasingly constitute a larger percentage of the total student body. They have special needs and are often a good judge of how these needs can be met most effectively.

The selection process for developmental programs appears most satisfactory to students when choice is theirs, and/or there is an identifiable competency or performance level to be achieved. In both instances, there is recognition on the part of students that their current academic skills need upgrading. Records and test scores aid faculty in making the most appropriate recommendations. Students generally respect these recommendations and express a desire to improve skills to "survival" levels.

Often recruitment procedures are linked to opportunities for financial support, such as HEOP, BEOG, or OVR which have targeted client groups. The economically disadvantaged are often also educationally disadvantaged. The numbers within these groups are often great enough for required "preparatory" or "extended" skill programs.

Indifference to developmental programs tends to result when the experience is perceived as repetitious to previous educational experience whether the program is preparatory in nature for groups or provided on an individual basis. Known exit standards or competency levels for completing the program are viewed with favor by students, especially when opportunity to return on an individual basis is available in order to obtain additional skill help as needed.

The skills that constitute reading, writing and studying are perceived by students as most valuable. Math is also valued, particularly when mathematics is central to the desired career program. The sense of "being able to ask for help without fear of put down" is critical -- a kind of "safe" home base from which to expand to other courses. As a result of this support, skills improve and confidence increases. Such an atmosphere is created through efforts of full-time professional staff who earn and subsequently build upon respect of other faculty.

Segue

A separate research report details procedures and outcomes of the project efforts to date. The content of this series of monographs is based on these data but tempered by considered judgment, and the inputs and experiences of professional colleagues. In addition to this overview, a separate monograph addresses five other topics: recruitment and selection; diagnosis and prescription; programming; staffing and facilities; and evaluation. Within each topical area problems and issues, recommendations and implications, potential impact and guide questions for program considerations are identified and discussed. The monographs provide clues through the identification of active variables relative to student success that have been validated with a representative sample of students and programs. An awareness of this information may result in local program adaptations or integrations that have positive impact upon program effectiveness. Characteristics of developmental programs do and will continue to change, --- a reflection of current times and natural program evolution. As long as the mission of two-year colleges includes a strong

commitment to serving the individual needs of all students there will be a place for programs that provide assistance in attaining "survival skills".

---

[1] "Overview-Developmental Studies for Occupational Students - A Sourcebook for Post-Secondary Programs", Cornell Institute for Research and Development in Occupational Education, Ithaca, New York, July 31, 1976, Research Publication 76-4.

[2] "Post-Secondary Developmental Studies Programs For Occupational Students: An Impact Study", Cornell Institute for Research and Development in Occupational Education, Ithaca, New York, September, 1977. Research Report.

[3] Survey of Personal Values, L. V. Gordon, SRA, Inc., Chicago, Illinois. 1964-1965.

Survey of Interpersonal Values, L. V. Gordon, SRA, Inc., Chicago, Illinois. 1960.

Monograph #2

RECRUITMENT AND SELECTION

Developmental Studies

© LaVerna M. Fadale 1977
ALL RIGHTS RESERVED

MONOGRAPH #2: RECRUITMENT AND SELECTION

Problems and Issues

The primary issues in recruitment and selection of developmental students have two foci: delegation of the responsibility among admissions, developmental faculty or a combination, and setting criteria for admission to the college and program that will produce desired student/faculty workload ratios and staffing assignments while at the same time enrolling only those students that really need and will profit from the kinds of developmental instruction that are offered. Should the college require certain courses or allow the student a voice in the selection? After the criteria for selection are determined, no small task in itself, the problem remains of staff time to evaluate the records, administer the tests and make the judgments that will have a major impact on the student's college life.

Most colleges try to communicate the availability of developmental studies program efforts to perspective students through the college catalogue, targeted announcements, admissions counselors, and occasionally through the use of direct communications to high school guidance counselors. It is not unusual to require developmental studies previous to admission to the career program sought by the student. In some colleges students who are admitted under BEOG, OVR or HEOP status are automatically enrolled in several if not all developmental offerings. At one institution, for example, second semester recruitment for developmental programs is defined by the existence of a special admissions program whereby students not accepted for fall entrance were advised that spring enrollment was possible in an extended program that included enrollment in certain developmental courses. Another college recruits second semester students from first semester students on academic probation.

High school academic records and college entrance test scores are first indicators of potential need for developmental studies programming. The techniques utilized in selection include review of admission records, faculty and staff referral, student self-selection or volunteerism under advisement, and combinations of all techniques. The selection process also involves basic skill testing to a lesser or greater degree in nearly every institution. A variety of standardized and locally developed measurement tools are used to estimate entrance skill levels in reading, language, and study habits. Many programs also test for math capability. Often the testing results serve as diagnostic indicators as well as placement criteria.

There is a loose consensus among faculty that no one should be accepted at any college with less that a seventh level reading capability. There is also evidence in some colleges that a reading level of above nine is a threshold associated with passing grades in college. One college requires and others would argue for remedial instruction until students reach the eleventh level of reading. In two of the more successful programs, students, after testing, are not required to take certain developmental courses but rather are strongly counseled by faculty and student personnel staff members to enroll in developmental courses based upon the test results.

Recommendations and Implications

The problem of selecting the right student exists on nearly every campus. If the requirements are strict in terms of standardized test results and/or economic disadvantages, such as HEOP status, programs run the risk of requiring courses that students perceive to be wasteful and demeaning. Reliance on high school records and entrance exam scores as indicators of student potential has obvious drawbacks when the returning student is older and there is a life experience span between high school and entry into a two-year college.

Research findings indicate that testing should occur - that each college should make an attempt to find their local success level thresholds and that through advisement and counseling of faculty and staff rather than through requirements at admission, students be made aware of their chances and be allowed to in a sense volunteer, i.e. follow the advice of faculty and staff. Project experience leads to this recommendation since the element of self-selection overcomes to some degree attitudinal problems that often arise with the realization of being labeled as marginal. The ideal selection process may be one of testing, individual counseling and advisement, volunteerism for enrollment and then a freedom to change from one level of class to another (to higher or lower competency level classes) after a few weeks of instruction with the change of class based on in-college performance rather than past historical data in a different educational environment at a different level of maturity. The cost of this kind of flexibility is in schedule changes, record keeping and faculty attitudes as class rosters change. If faculty are involved in advising the changes, as they

should be, some attitudinal problems may be overcome. The few students that might change would miss a few weeks of instruction but otherwise they may waste the semester or withdraw completely. The computer can do whatever its programmers program!

Another technique highly recommended is counseling at a pre-admissions point. The counseling takes many forms. Some of it may be directed toward the availability of financial support such as HEOP, BEOG, OVR. Often these are specific target audiences that are scheduled together as a group. This approach is widely used and often successful but should be followed with a concern for the individuals comprising the group.

Data have indicated that the selection process is most satisfactory when students approach participation in developmental courses with a sense of personal choice. A tendency to accept emerges more strongly when there is an identifiable competency or performance level to be achieved in contrast to time commitments. It is suggested that in skill programs extended over time, there be awareness that some students may reach a point of diminishing returns when the group process no longer is fulfilling their individual needs. When recruitment is aimed toward a targeted audience for which developmental work will be required, it is recommended that additional attention be given to the individual.

Project information indicates that non-traditional students often recognize that their current academic skills need upgrading. They tend to respect the recommendations made by faculty or counselors and have a desire to improve their skills in order to survive at the college level. These findings suggest that recruitment and selection procedures focus as much as possible on the individual in terms of personal goal

orientation and motivation, in contrast to any grouping admission practices, thereby allowing for the personal choice element based on identifiable competencies or performance levels. It is also recommended that students be given a clear understanding of their status relative to admission to the career or academic program of their choice and the developmental program that is required or recommended.

Potential Impact

The implementation of these recommendations and suggestions at both the policy and practice levels of the college should result in a better understanding by students of why they are taking the courses or the modules and what is expected of them. Many developmental instructors integrate this information as part of their instruction but to learn why after the fact is often counterproductive. These suggestions will put demands on not only the developmental staff but on counselors and admissions and recruitment staff in order to individualize the selection approach and/or to specify success criteria far more specifically than currently is being done. The impact on the college need not be overwhelming but may require a kind of flexibility in scheduling and staff assignments that often does not exist. There will be costs associated with procedural flexibility but if the attitudes support greater individualization the benefits should be worth the efforts. For the community at large, it will provide a definitive and more accepting path for these non-traditional students once they decide to re-enter college than may currently exist.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Does selection testing reflect locally determined threshold levels?*

2. *Does the selection process include counseling and/or advisement to complement high school records and test scores?*

3. *Does the selection process allow for an element of self-selection or personal choice to participate in developmental studies?*

4. *Is there sufficient flexibility in scheduling to allow change of competency level class after the initial weeks of instruction?*

5. *Is there opportunity for attention to the individual who is a member of a targeted group in a developmental program?*

Monograph #3

DIAGNOSIS AND PRESCRIPTION

Developmental Studies

© LaVerna M. Fadale 1977
ALL RIGHTS RESERVED

MONOGRAPH #3: DIAGNOSIS AND PRESCRIPTION

Problems and Issues

Diagnosis and prescription procedures often grow out of the recruitment and selection process. In many programs diagnosis/prescription data are collected during admissions and program placement testing but a distinction should be made between the group oriented procedures and the individual focus of diagnosis and prescription. The latter procedures are primarily in-class faculty concerns and the problems and issues are not unlike those associated with any program of individualized instruction. Through testing, group threshold levels can be identified which relate to future student success. The problem is how to vary the group experiences to best meet the needs of the individual student.

There is no guarantee that any group prescription will be effective for individual students comprising the group. On the other hand, how much individualization or prescription is feasible given the constraints of course schedules, class size, standard exit criteria, and other factors within the college. Once individual prescriptions have been identified, can they be effectively addressed by instructors? Does the institution have adequate resources in terms of materials, curricula, flexibility and staff to provide the prescribed instruction? A positive attitude often becomes crucial to attain competency of survival skills. At best, attitudes are difficult to diagnose, but can be vital to effective prescription for an individual student. Attitudinal change usually requires an extended period of time but may in many instances be necessary prior to skill improvement.

Many tests used for selection and placement are really diagnostic instruments and as such appropriately serve a dual purpose. In many cases testing involves a combination of standardized and locally designed instruments. Reading is usually tested with a standardized instrument. Locally derived measurement tools are often used with writing, and to some extent mathematics. The Nelson-Denny Reading Test, California Achievement Test and Stanford TASK Tests are most frequently used. A listing of other frequently used instruments are appended to this monograph. The ACT Test (English and/or Study Skills), the SAT and the GED are more commonly used for admissions and program entry but also have some diagnostic value.

In the larger programs testing results are used to place students in the appropriate level of remediation, but in most programs results are used for placement in the developmental course and to provide some indication of where to initiate instruction. Once a beginning is made, and rapport established between instructor and student, the professional staff may use a variety of formal and informal techniques for individual diagnosis/prescription. Specific needs of students emerge allowing for more effective matching of instructional materials and activities with individual needs. Idealistically, this takes place. Realistically, we hope it takes place for a majority of students.

Recommendations and Implications

Counseling during the initial stages of enrollment is indispensible for providing a positive start. This supportive service not only emphasizes an institutional perspective of concern for student welfare but provides a technique to become more knowledgeable about incoming

students. Data results have indicated that successful students tend to have a sense of commitment to career, college and/or program. The research process has also demonstrated that "commitment" can be determined through utilization of selected items from the student questionnaire and in an interview/conference situation. The combination of item responses and indicators from an interview situation should provide a counselor or staff member with a sense of student commitment. This knowledge has implications for optional experiences, such as group or career counseling or a sampling of courses.

Generally, usage of standardized tests to determine attitudes or the affective domain is not widespread. This research effort has demonstrated potential utility of the SRA[1] scales used in data collection. They are quick to administer, fifteen minutes each, and the reading level is not prohibitive. Their use is recommended when an additional indicator is warranted or as an entry to counseling sessions. In a number of analyses the group comprising successful developmental students tended to value some factors (i.e. goal orientation---as described in the instruments) to a greater or lesser degree than the group of unsuccessful students. A profile of these characteristic values provide a kind of standard or comparison norm for local use and is appended (A).

The student questionnaire developed and used in the project included several items related to commitment to college, career and program. These variables were identified to be related to success criteria. Knowledge of student commitment as determined by these items provides another indicator of success and may be especially useful to staff members working with career and personal decision skills. The items are compiled into a Commitment Inventory and appended with a profile of responses.

Overall, faculty predictions emerge as a consistent and valid success predictor. If a group of developmental faculty used this technique at some time prior to mid-term, the consensus concerning student success or non-success may indicate areas of need that when addressed will help increase future success. The Success Prediction Scale used by faculty (Appendix C) is based on ten characteristic behaviors/attitudes described as a continuum of successful vs non-successful students.

Depending on program format, students may be entirely developmental or be concurrently enrolled in one or more courses of their career program. The demands of a career or academic program can be the basis or provide structure for prescriptive techniques. If concurrent enrollment exists, actual assignments and texts may be used in teaching skill development.

Caution is urged against repetitious learning experiences. Data suggest that increasing numbers of students entering college directly from high school may have previously experienced remedial materials or techniques at the secondary level. Developmental staff should be conscious of this fact and aware of the kinds of materials being utilized in secondary institutions within the primary service district of the college.

Entrance measures or diagnostic procedures should be realistic to the local institution and serve as a preamble of instruction followed by valid exit measures. Exit and entrance criteria and test scores should be established in accordance with institutional policy, clientele, priority and needs, therefore it is not realistic to state a standard entrance criteria or test score as appropriate to all developmental programs across the state. Evidence has been shared that indicates a minimum reading level approximating grade ten has predictive value toward successful academic completion of

a program at 2.0 grade point average. Research data confirms that higher reading stanines at entry are precursors of later academic success. But staff members at each college should seek a minimum threshold level at which a majority of their students function effectively.

Whatever constitutes a basic diagnostic testing program, the data can be used for an individual and a group data base from which progress is measured and assessed through performance objectives and competencies during instruction. These competencies and performance levels should be identified in order that students be aware of expectations held for them.

Potential Impact

Potential impact of effective diagnosis/prescription are instructional experiences that contribute to student success. True, the success may be withdrawal or change of program which may occur after "uncommitted" students accumulate a broader base of information from which to make decisions. Older students tend to be more goal-oriented than younger students but this does not pre-empt the need for attention to affective as well as cognitive dimensions. Known competence levels followed by flexibility to adjust programs will result in effective utilization of time and resources and allow for more student participation in courses as motivated. The availability of a flexible approach will help reduce barriers to non-traditional students and should tend to encourage their enrollment.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Are valid entrance and exit measures established?*

2. *Are students and faculty aware of these competency levels or competency expectations?*

3. *What are the individual diagnosis procedures used in the developmental program?*

4. *Are appropriate staff members involved in these procedures?*

5. *Does the diagnosis process provide the inputs necessary for individual prescription?*

6. *Is there sufficient flexibility in program and schedule to allow implementation of prescription?*

7. *Is counseling and advisement a functional part of the diagnosis and prescription process?*

APPENDIX A

SRA Personal and Interpersonal[1] Value Inventories: Profiles for Comparison

The analysis of data has demonstrated that selected variables, as measured by the SRA Inventories, have predictive power or are the most likely to indicate potential success of developmental students. The mean percentiles for responses given at the beginning and at the end of the semester plus the rate of change are summarized for successful and non-successful developmental students in the following chart. The six values listed first were leading contributing factors to student success as determined by multiple regression analyses. The summary chart provides a profile for comparison and utility at the local level.

---

[1] Survey of Personal Values, Leonard V. Gordon, SRA, Inc., Chicago, Illinois. 1964-1965.

Survey of Interpersonal Values, Leonard V. Gordon, SRA, Inc., Chicago, Illinois. 1960.

Value Factor	Mean Percentile at Beginning of Semester		Mean Percentile at End of Semester		Rate of Change	
	S*	U*	S*	U*	S*	U*
Goal Orientation	63	58	60	41	-3	-17
Conformity	44	48	35	44	-9	- 4
Recognition	48	50	48	59	0	+ 9
Support	64	56	61	63	-3	+ 7
Variety	42	49	42	63	0	+13
Leadership	53	52	55	52	+2	0
Achievement	43	32	43	37	0	+ 5
Independence	67	64	71	63	+4	- 1
Orderliness	58	59	57	54	-1	- 5
Benevolence	60	59	52	53	-8	- 6
Decisiveness	49	42	49	44	0	+ 2
Practical Mindedness	61	67	65	68	+4	- 1

*S = Successful
*U = Unsuccessful

APPENDIX B

Commitment Inventory: Profile of Responses

Based on the results of data analysis, commitment to college, career and/or program emerged as active variables relative to success. Selected items from the questionnaire identified below reflect the commitments of students. Following each question is a percentage break-down of responses most frequently given by successful and unsuccessful students during the initial weeks of the semester. Detailed data analysis is available in the research report "Post-Secondary Developmental Studies Programs for Occupational Students: An Impact Study."

- -

1. Was this college your first choice?

	Yes	No
Successful	84%	16%
Unsuccessful	86%	14%

2. Was your choice of college influenced by others?

	Yes	No
Successful	35%	65%
Unsuccessful	50%	50%

3. Which one best describes why you enrolled in your program or course of study?

	My Choice-it was really what I wanted to study or the closest to it	Others influenced me-was advised to enroll or am only taking it until I can transfer
Successful	84%	16%
Unsuccessful	63%	37%

$p < .05$

4. How sure are you of your career goal?

	Very Sure	Moderately Sure	Not Sure
Successful	54%	38%	8%
Unsuccessful	30%	57%	13%

$p < .09$

5. Do you feel that the program in which you are enrolled is a useful step toward your career goal?

	Yes	No	Best Compromise
Successful	87%	3%	10%
Unsuccessful	90%	-	10%

6. *Which one of the following best describes how you enrolled for developmental courses or services?*

	Assigned or Recommended	My choice to improve skills in which I need(ed) help
Successful	68%	32%
Unsuccessful	63%	37%

7. *When did you enroll in developmental courses or services?*

	Registration	During first three or four classes
Successful	77%	12%
Unsuccessful	63%	3%

$p < .08$

	Middle of Semester	Beginning of Second Term	Other
Successful	-	5%	6%
Unsuccessful	4%	23%	7%

8. *Do you feel that the college in general tries to respond to student needs and desires?*

	Don't Know	Yes	To Some Extent	No
Successful	-	68%	33%	-
Unsuccessful	-	48%	48%	4%

$p < .08$

9. *How do you rate the way faculty and staff generally respond to your needs as a student?*

	Negative 1	2	3	4	Positive 5
Successful	2%	4%	22%	38%	34%
Unsuccessful	-	11%	29%	46%	14%

APPENDIX C

Success Prediction

Successful Students (academically eligible to continue program of studies, or consciously deciding to change program or college plans)	*Unsuccessful Students* (in danger of, or already failing a course)
Motivated (committed, ambitious, industrious, responsible).	*Unmotivated (apathetic, depressed, uncommitted, uninterested).*
Assignments/projects completed on time.	*Assignments/projects incomplete and late (plagiarizes, ignores detail, repititious errors, unable to generalize concepts).*
Enjoys learning and learning activities.	*Learning has less priority than other activities, i.e. job, hedonistic, family.*
Goal oriented (realistic, flexible, purposed behavior).	*Is not goal-oriented (erratic, irresponsible, non-purposed behavior).*
Ability to plan time, use time effectively (organized, independent).	*Lacks ability to plan and use time effectively (unorganized).*
Achievement oriented.	*Non-achievement oriented.*

Successful Students	*Unsuccessful Students*
Is inquisitive (challenging and clarifying questions, communicates freely, alert to new ideas).	*Does not ask questions or seek help.*
Positive self-concept (realistic as to abilities, accepts constructive criticism, mature, optimistic, will to succeed).	*Negative self-concept (unrealistic assessment of abilities, resents criticism, immature, lack of "success" drive).*
Possesses academic survival skills (good study habits, organized, thorough, persistent, able to apply concepts, future oriented).	*Lacks academic survival skills (poor study habits, unorganized, gives up easily, does not apply concepts).*
Attends classes, seminars, labs regularly.	*High rate of absenteeism.*

SAMPLE:

CHECK PREDICTION

STUDENT NAME	*SUCCESSFUL*	*UNSUCCESSFUL*
Adams, John		✓
Brown, Hazel	✓	
Carr, Ken	✓	

APPENDIX D

Frequently Used Standardized Instruments

Nelson-Denny Reading Test
California Achievement Test
Stanford TASK
Gates MacGinitie
Missouri College English Test (Harcourt)
Writing Test: McGraw Hill Basic Skills System
Tests of Standard Written English (CEEB)
American College Testing
Scholastic Aptitude Test
General Education Development

Monograph #4

PROGRAMMING

Developmental Studies

© LaVerna M. Fadale 1977
ALL RIGHTS RESERVED

MONOGRAPH #4: PROGRAMMING

Problems and Issues

There is little disagreement that some kind of instructional offerings of a developmental or remedial nature are appropriate for a small number of two-year college students. Issues revolve around the exact nature and scope of services plus related questions such as should instruction be required or elective, should courses be credit-bearing, should program admission be dependent upon or concurrent to developmental instruction. Developmental programs may also require new or additional materials and equipment and a reduced number of students per class than a traditional freshman course. The problems of financial and human resource allocation are inseparable from the basic educational programming decisions and are often the delimiting factor.

Although the program offerings vary from college to college there are similarities. Most programs can be categorized as employing one or more of four basic approaches allowing that operational details within each approach may differ from campus to campus. The four categories are outlined as follows:

Block Scheduling: three or four credit-bearing courses in which all developmental studies students are enrolled for one semester. The faculty often work in a modified team-teaching context.

Centers: basic skills or learning laboratory centers serve as central focus for short-term assistance, referrals, and informal and formal course work.

Designated Courses: one to several courses designated as developmental to be taken previous to enrollment in required courses. The courses may be offered by developmental faculty or by faculty within academic and technical departments.

Integrated Teaching: a kind of non-program approach that assumes each faculty member will respond to the individual needs of students in their respective classes by individualized assignments and/or referring students to appropriate sources of assistance within the college.

Most programs are combinations of these approaches with one or more supportive college services supplementing the formal offerings. Supportive services include a variety of activities such as special advising/counseling, peer tutoring, modules and short courses. A detailed discussion of programming approaches is available in a previous publication, "Overview-Developmental Studies for Occupational Students-A Sourcebook for Post-Secondary Programs", 1976.

Summary of Research Information

Research data has shown that skills needed most frequently by students are in the areas of reading, writing and studying. Basic communication and academic survival skills were reported by non-traditional students as the areas in which they need the most improvement. Skills in math are often valued by students who are either enrolled in or hoping to enroll in career programs requiring mathematics, such as the engineering technologies.

Reading:

General objectives for reading components of developmental programs include: to increase reading rate, comprehension, reading level, vocabulary, interest in recreational reading, and skills in taking tests. These objectives reflect the needs identified by students; to read more quickly, understand more of what is read, read more difficult materials and outline more effectively. Various success standards have been set for these general objectives including ability to read at a 10th, 11th or 12th grade level, scoring at stanine 5 on the TASK exam, achieving a minimum reading level of 9.8 on the Nelson-Denny and demonstrating a gain of two grade level equivalents in reading. Other criteria used by faculty include instructor judgment of progress, completion of all assignments satisfactorily, faculty perceptions of general improvement in skills and attitudes, and demonstrated ability to apply skills learned in developmental studies to academic problems in other courses.

Writing:

The writing component of developmental programs often includes improvement in the following skills: grammar, sentence structure, spelling, style, logic, theme structure, structuring and development of a paragraph, topic development, and writing expository paragraphs and short essays. Criterion measures or success standards have been expressed as: demonstration of ability to write an acceptable essay, demonstration of ability to complete assignments, observable progress in the development of an idea and the structure of a theme, general improvement, instructor judgment and completion of an acceptable short essay or long paragraph. These criteria also

reflect the kinds of needs identified by students such as to complete acceptable written assignments, to make fewer spelling errors, and to generally write more effectively.

Study Skills:

General objectives for the study skills component include: to improve time management and task organization skills, to demonstrate effective techniques for reading of textbooks, taking tests, effective listening and note taking, to develop necessary outlining skills, and satisfactory completion of a research paper. The success standards for study skills have been indicated as the presence of self-motivation or a "stick-to-it-ness", general improvement, achievement of performance objectives, instructor judgment, student feedback as to carry-over effectiveness and grade point indices.

In response to questionnaire items, students expressed the need to be able to outline readings effectively, to take more effective notes in class, to complete assignments on time, to use time effectively, to keep interested in courses and to become more comfortable when speaking. The objectives set forth for the study skills component generally reflect the needs designated by the students.

Other Program Elements:

Many developmental programs have a math component for which objectives are stated as: to improve basic arithmetical and algebraic computational and reasoning skills, and to relieve fear of mathematics. The success standards for these objectives include: math competency through the beginning of elementary algebra and demonstration of math competency. Students have indicated a need to compute more accurately and to perform algebraic computations.

Some developmental programs include a vocational or personal study dimension usually scheduled as a psychology or a career decision-making course. This dimension may also be programmed as a series of group guidance or counseling sessions that occur concurrently with and occasionally as a formal part of developmental courses. Objectives given for these kinds of efforts include: to identify tentative career goals, to increase understanding of personal need and abilities. Success standards include: understanding of self, aptitudes, values, and the relation of these to career selection, general improvement, completion of value clarification exercises, completion of cognitive style assignments and completion of relevant projects.

Recommendations and Implications

The data indicate that instruction in reading, writing, and study skills is most successful when textbook, lecture and subject matter from required courses are used as much as possible. Students look for and respond to help in applying the basic skills to subjects that they have an interest in or must complete in order to continue. It is recommended that developmental staff

in cooperation with career and academic staff build a pool of exercises using required course content for use in learning the skills that will have a natural carry-over to their main goal --- completion of a career program. This results in skill improvement and in the successful application of skill improvement that could initiate an on-going process of positive reinforcement.

Motivation to achieve is stronger when credit is attached to career, academic or developmental programs. Credit also alleviates to some degree the problem of staff time spent in non-credit hour producing activity. Of late, the awarding of credit for developmental courses has been the subject of much discussion including the question of eligibility for financial aid. This can be a highly complex issue but it is recommended that the institution seek to establish credit status for at least core courses and that, prior to actual enrollment, credit status of courses is clearly communicated to students.

The formal class size in developmental studies should be such that individualized instruction techniques may be used as appropriate. Class size should not hinder the delivery of personal attention that non-traditional students need in these kinds of programs. Most faculty feel that 12 to 15 students is an acceptable size but some classes of 20 are manageable if a laboratory period is scheduled as part of the time allotted.

The scheduling of courses for developmental programs should be sufficiently flexible to allow students to take advantage of elements of the developmental offerings as needed. An ideal schedule would allow students to take one or more courses or participate in a non-credit drop-in and drop-out approach, thereby encouraging the student to responsibly evaluate and determine those activities necessary to successfully complete the career program.

It is recommended that developmental programs consist of four subject areas: reading, writing, study skills and counseling or vocational-personal decision-making. However this does not mean that a separate credit-bearing course be established for each skill area. Attention may be given these areas in combination with each other or other subjects. Math skills are also strongly recommended and should be included when career programs of the institution focus upon the use of computational skills.

It is recommended that scheduling within the program be flexible to the degree that once a minimum level of competency is attained, individual students have a choice to continue or to participate in other kinds of learning activities such as a module, self-paced or audio-visual instruction. This provision allows the student to choose (be responsible for the choice) continuing involvement once the minimum competency level is reached. Realistically such flexibility may be limited but it is strongly recommended that the developmental staff work to provide alternate avenues for individual students to pursue rather than creating a repititious experience in which students see little value. It is acknowledged that some students may not perceive the need for certain instructional activities and feel that in fact they possess or have acquired the skills they need. With competency testing prior to enrollment and prescribed performance levels known at the beginning, the variance between faculty and student perceptions is reduced and time "in grade", completion of a semester, becomes less of a negative attitude source.

It is recommended that counseling be included and/or integrated into the developmental effort. It is a misnomer to categorize counseling as a supportive service for these non-traditional students if the meaning of

ancillary is carried to the reader. Counseling can help the student directly and provide the developmental staff with data that might otherwise be lost.

The supportive service of peer tutoring or a tutoring program is one that has been demonstrated to be highly effective. The concept of receiving short-term help from a peer, but with faculty knowledge and support, results in better performance by the student who has been tutored and often is a learning experience for the tutor as well. It is recommended that such a service be organized and managed by professional staff as part of the developmental effort thereby providing the continuity needed for it to be maximally effective. The peer tutoring program need not be exclusive for developmental students, in fact it is recommended that it be a college-wide program that developmental students can access.

Faculty and administration should examine the question of institutional vs student accommodation when considering programming details. That is, to what extent should the institution alter admissions criteria, instructional techniques, textbooks, and schedules to meet needs of non-traditional students or must students always be expected to change. Existing standards have been established for the more traditional kind of two-year college student previously expected to enroll. The two-year college philosophy leans toward institutional change but each institution must find the appropriate compromise position.

Potential Impact

In times of budget reductions and staff retrenchment there appears to be little potential for expanding developmental programs; holding the line is more often the goal. Paradoxically, the greatest number of potential new students appear to be older, part-time or in other ways non-traditional students who are less apt to succeed if the services offered by developmental programs are not present. Institutional impact might be measured by small increases in enrollment and increased retention of the non-traditional student segment. Providing the support needed by non-traditional students results in an acknowledgment of their worth and belief in their potential. When seen as useful and helpful, word-of-mouth recommendations by students to peers is the truest form of accountability which may lead to a most positive image of the institution in the community. Several years ago the catch phrases "open enrollment" and "full opportunity" were sufficient to begin programs. It is hoped that economics will not totally overcome that educational philosophy.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Does the developmental program emphasize those skills indicated as areas of need by students and other staff (reading, writing, study skills, career-personal decision-making and math as appropriate)?*

2. *Is the content of skill instruction based on career and academic course requirements?*

3. *Does the developmental program have identifiable goals, objectives and outcomes?*

4. *Do the developmental offerings carry a positive connotation to students generally? To faculty?*

5. *Do developmental offerings carry credit when educationally appropriate? Is credit status clearly communicated to potential students?*

6. *Is the scheduling of developmental offerings flexible enough so that it allows for a student voice as to participation, return, periodic requests for help and/or continuance?*

7. *Are class sizes appropriate for individualized instruction as needed?*

8. *Is the supportive service of tutoring available and managed by professional staff?*

9. *Does the institution as a whole examine its role relative to non-traditional student needs?*

10. *Does the program provide a process to allow student drop-in and drop-out after formal completion of program?*

Monograph #5

STAFFING AND FACILITIES

Developmental Studies

© LaVerna M. Fadale 1977.
ALL RIGHTS RESERVED

MONOGRAPH #5: STAFFING AND FACILITIES

Problems and Issues

A major problem on many campuses is recruitment and retention of capable and interested staff members to devote part or most of their effort to developmental instruction. Budgetary support, student/faculty ratios, status and promotional possibilities and peer recognition are related issues that impact on staffing difficulties. Effectiveness in teaching developmental courses requires attitudes and skills in working with non-traditional students not possessed by every college instructor. The goal is often one of teaching students how to learn rather than providing them with as much knowledge as they can ingest.

A strong consensus exists among current practitioners that developmental studies staff members should have training and/or experience in remedial or developmental education as well as willingness to undertake those instructional assignments voluntarily. Perceptions of optimal staffing ratios vary from individual to individual but most feel that the smaller the class the more potential exists for individual attention. The faculty workload problem can be further aggravated if effort is expended on instruction that does not produce student credit hours.

The use of adjunct staff members in developmental programs is economical but may not be advantageous in terms of helping students cope with the courses that they will be taking at the completion of their developmental instruction. Ad hoc or adjunct staff also tend to be more mobile, and subject to retrenchment actions in tight budget situations. Project research data support the notion that developmental studies instructors should be bonafide college staff members with department affiliation rather than adjunct or support staff attached to a non-instructional college unit.

In several of the more successful programs, it has been observed that a primary program strength is the supportive and professional interactions that exist among faculty members; recognition of the importance of what developmental staff are doing as well as for their capabilities to perform in a "normal" professorial role. Professorial or instructional departmental membership also enhances communication of needs and problems of developmental programs among the staff, allows for more effective student advisement, and promotes collegial sharing of the concern for helping students achieve. Professorial and departmental status also lends support to the morale of staff members in general, and to the perspective that they are performing legitimate instead of ancillary roles.

No single administrative structure appears associated with successful programs. In some cases the program is managed by the Academic Dean, in others the Dean of Students, and in other cases the program operates as part of a separate department or division reporting to another administrative office. In several situations, one or more college staff members appear to be the influential leaders of the developmental program whether they hold administrative titles or professorial status. The configuration of the administrative structure seems to be less important than the actual individuals in the positions and the power that these individuals have within the college decision-making structure.

Recommendations and Implications

It is recommended that developmental program instructional staff hold academic rank and have background and expertise in developmental education. It is also suggested that attention be given to identifying faculty with the appropriate attitudes for teaching in developmental programs for part-time assignment, perhaps on a rotating basis. Research data have shown that there are characteristics, defined by the standardized instruments used in the project, which differ among faculty. These instruments might be considered for use in addition to an expressed interest in developmental instruction, with attention given to specific scales which have indicated differences in the valuing factors by developmental faculty contrasted with non-developmental faculty. (See Appendix).

Whatever teaching assignments or staffing guidelines emerge for developmental programs, it is recommended that time for joint staff planning, faculty conferences, and student follow-up activities be made part of the job description or teaching assignment. It is also discernible from research data that there is need for communication and interaction with other staff and faculty members. During the data-gathering process, it was demonstrated that when a program earns the respect of students, respect and interaction by other faculty emerges. Once this level of free interaction and sharing begins, the vitality of the program is carried on by a momentum of giving and receiving. The recommendations outlined above are acknowledged to be ideal and would require ideal administrative support to implement.

Most programs are currently supported by institutional funding although grant funds have often been used to initiate or supplement program elements.

Funding is an acknowledged problem that must be dealt with and some viable compromise arrived at. With small programs even a modest financial reduction can have serious program consequences.

Facilities

An appropriate facility for a comprehensive developmental program includes use of an area, center or location which serves as "home base" for developmental efforts. Such a physical area or center should be located in the natural flow of student and faculty traffic. The physical facility itself should be such that there is no stigma attached to its use. This does not mean that the physical area has to be a newly furbished thirty carrel learning center with banks of audio and visual self-paced instructional packages. It may be little more than modestly equipped classrooms or a few offices with a secretary or technician serving as a first-level advisor, receptionist and traffic controller. The center may also be attached to a library, media center or to a counseling-human development center. It is strongly suggested that staff, materials and facilities for the developmental program be centralized and readily available to scheduled classes and walk-ins alike. If staff and materials are difficult or demeaning to access at the time students are motivated to use them, the efficiency and effectiveness of a developmental effort declines.

Potential Impact

A traditional higher educationist might respond to these recommendations by questioning why students with such basic needs were allowed to enroll in college. Shouldn't faculty members do remedial teaching as part of their class load or voluntarily work with students out of class instead of spending extra dollars for specialists? Aren't all two-year college staff members developmental educators and ultimately responsible to impart to students the skills needed in their career or academic programs?

Ideally yes, but tradition and professional preference has moved toward instructional specialists working in systems of tracking or homogenious scheduling. Professorial dedication to excellence in a discipline is also a fact of higher education spurred on by judgments that students with special needs require additional and compensatory services beyond those provided through regular instruction. Yet the more successful programs are becoming more integrated than separate in terms of staffing, facilities, curriculum and budgetary support. Integration or infusion is the long range goal but separation and distinction may be needed in the earlier stages of developmental programming in order to highlight the unique needs of the program within the larger institutional concerns.

If developmental staff have the dual status of specialists and regular departmental affiliation and additional staff members can be called on as enrollment levels dictate, the developmental staff can also be a college-wide resource rather than an additional expense. Assuming many of the ideals listed in the recommendations, a compromise position can be found among the sometimes conflicting pressures of college commitment to serving the needs of all students and the trade-offs associated with priority setting.

The potential impact to students participating in programs is that they will find at entrance a supportive home-base which they will be able to use throughout their college careers. When application, although beyond the time of any formal instruction, is found difficult or skills that they learned do not seem to be adequate, they know they have a place of return to obtain extra help. Subsequently this should increase student effectiveness in regular career and academic programs which after all is everyone's goal.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Do staff members have expertise in and credentials for developmental programs?*

2. *Do staff members hold rank and status in the college as well as in the developmental program?*

3. *Does scheduling allow for and encourage interaction and cooperation with other faculty and staff?*

4. *Are the physical facilities for developmental programs centralized and easily accessible to students?*

5. *Are there opportunities for staffing dual assignments if only occasionally?*

APPENDIX

	Mean Percentile Profile[1]	
	Developmental Faculty	Non-Developmental Faculty
Practical Mindedness	43	27
Achievement	67	87
Variety	37	42
Decisiveness	51	39
Orderliness	50	51
Goal Orientation	55	56
Support	55	58
Conformity	19	42
Recognition	58	33
Independence	57	54
Benevolence	56	76
Leadership	70	38

---

[1] *Survey of Personal Values, Leonard V. Gordon, SRA, Inc., Chicago, Illinois. 1964-1965.*

Survey of Interpersonal Values, Leonard V. Gordon, SRA, Inc., Chicago, Illinois. 1960.

Monograph #6

EVALUATION AND MANAGEMENT INFORMATION SYSTEM

Developmental Studies

© LaVerna M. Fadale 1977
ALL RIGHTS RESERVED

MONOGRAPH #6: EVALUATION AND MANAGEMENT INFORMATION SYSTEM

Problems and Issues

The problems associated with evaluation stem from the multiple factors outside of the developmental program that can and do impact the success of students. An iron-clad cause and effect relationship can not be proven. Because the evaluator must amass circumstantial evidence or a series of related indicators, a comprehensive evaluation of developmental programs demands a multi-dimensional approach in terms of time points as well as the kind of data collected. Research outcomes have underscored the interaction of cognitive, affective, environmental and programmatic variables relative to program effectiveness. Data have supported the assumption that while no one factor can be determined as directly responsible for success or failure, active inter-relationships among variables can be identified as contributors to success. Data further strengthens the feasibility of assessing developmental programs in ways that reflect the total thrust of the institution. Developmental programs can and ought to be evaluated in terms of local goals and objectives guided by generalizable standards or guides. Evaluation can be a technique to help address the image problem some programs face by using evaluative data to confront negative attitudes towards remedial programs. A data-based demonstration of program effectiveness and its contribution to the institutional mission cannot be dismissed lightly.

The central evaluation issue grows from the local definition of program effectiveness. At least three kinds of effects or student successes can occur; skill and attitude increases, multi-year continuation through graduation, and conscious career decisions to leave school or change program. Each set of data requires a different time element, data source and collection procedure and, while each stage may be related, success with one set of

criteria may not mean success from another evaluative point of view. Should all leavers be counted as program failures? Should first semester skill increases be the primary measure of program effectiveness?

A related issue is the selection of appropriate standards. It is unreasonable to expect all developmental students to persevere to graduation if the college's history of the more capable students show a retention rate of 60%. It is equally idealistic to expect a student to improve five reading levels in one semester or suddenly become a dean's list candidate after a high school history of barely passing. Idealism is appropriate and often a necessary psychological support mechanism but the fact of slow progress and/or failure must be expected and dealt with realistically in setting standards for program evaluation.

Recommendations and Implications

To initiate a comprehensive assessment of a developmental studies program it is recommended that program goals be linked to college mission and goal statements. For example, goals of the developmental effort may be stated as:

- *opportunities will be given for each student to improve in basic skill areas in order to successfully continue in a chosen course of study.*

- *counseling and advisement services will assist students in career goal setting and decision-making.*

Program goals, stated to reflect local institutional mission statements, provide the framework for objectives. The categories for objectives include short-range student-centered performance objectives, long-range student-centered performance objectives and on-going program related objectives which are usually implicit but may need to be synthesized and formalized. Developmental staff have short-range student performance objectives for individual courses and support services. The long-range and related objectives may be identified by the director, dean or coordinator but are integrated with or extensions of the goals and short-range student objectives.

A comprehensive evaluation should address several kinds of outcomes at various time points:

Student-Centered Outcomes

- *Individual student attainment of skills, knowledges and attitudes that are intended to be direct outcomes of the instructional process.*
- *Longitudinal academic and social performance of students in their chosen programs.*
- *Longitudinal performance of students in relation to the mission and goals of the institution.*

Staff-Centered Outcomes

- *Effectiveness of the developmental faculty, other faculty and staff.*
- *Involvement and support by administration and faculty.*

Program-Centered Outcomes

- *Effectiveness of student recruitment and selection.*
- *Adequacy of testing and diagnosis procedures.*
- *Adequacy of facilities and equipment.*
- *Adequacy of instructional techniques and materials.*

More specifically, evaluation should seek information on student-centered outcomes such as:

- *Skill attainment, i.e. reading level, note taking, and writing.*
- *Impact of instruction or carry-over application of skills and knowledges to regular program courses.*
- *Retention/continuation rate.*
- *Success rate (as defined locally).*
- *Academic status or grade point averages of students in similar programs.*
- *Student attitudes and behaviors such as attendance and class participation.*
- *Student commitment.*
- *Skills in decision-making.*

While it is not the purpose of this project to recommend one evaluation system over another, the Reality-Based Evaluation System for program evaluation can be used in*

**Reality-Based Evaluation, Research Publication 76-3, Cornell Institute for Research & Development in Occupational Education, Ithaca, New York.*

the assessment of developmental programs. The approach is flexible, focuses on program objectives and provides a technique for managing the evaluation process. Utilizing RBE, Phase I, and drawing from research data, a simulated outline plan for assessment of a developmental program is included in the Appendix as a guide and reference.

In an actual evaluation, long-range objectives may be a major concern of the program administrator. The director of developmental studies might have major concern for the "related-to-program" kind of objectives while the teaching staff concentrate on the objectives directly related to the instructional program. This is not to say that all staff members should not be involved with the three categories of objectives. Realistically, a coordinated cooperative approach tends to result in a comprehensive rather that a limited focus evaluation effort.

Potential Impact

The major outcome of a comprehensive assessment is its potential to produce valid information and recommendations in order to increase the effectiveness of the program.

Effectiveness can include a number of outcomes in addition to a higher percentage of students earning passing grades. Among these are: the most efficacious allocation of resources, revisions in admissions criteria and program standards, greater program visibility and acceptance, staff development activities, increased cooperation and communication among faculty and, potentially, a broader base of support both human and financial.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *How does evaluation of developmental programs relate to division, department or college assessment?*

2. *Does a definition of program effectiveness exist in sufficient specificity to guide an evaluation effort? Are there identifiable standards for the developmental program?*

3. *What decisions need to be made or what questions are being asked about the developmental program by faculty, administration, and students?*

One set of program standards may not be applicable state-wide. It is more appropriate that standards be determined locally in terms of college mission, clientele and priority given to serving the needs of non-traditional students. At the end of each monograph, questions have been provided that may require answers as local standards are developed. These 27 questions reflect important problems and issues identified in the research effort. Although specific responses to these questions may vary from college to college, the answers collectively will approximate standards for local programs.

APPENDIX

EVALUATION OUTLINE FORM: PHASE I - CLARIFICATION

Long-Range Student-Centered Objectives

OBJECTIVES	EVIDENCE
Students will achieve a passing grade in their second semester.	*-grade point averages.* *-retention rates.* *-academic status.* *-withdrawal rate.*
Students will demonstrate a positive self-concept, self-sufficiency and goal commitment.	*-attitude scale and questionnaire results.* *-small group feedback.* *-withdrawal and transfer reasons and rates.*

STANDARDS	SOURCES/PROCEDURES
Seventy percent of developmental students will be academically eligible to continue at conclusion of second semester.	*Director of developmental studies will collect GPA, retention rates and academic status for developmental students at entry, mid of second semester, end of second semester.*
Seventy percent of developmental students will demonstrate a positive attitude toward self and individual abilities, and have chosen a tentative career goal.	*Counselors will hold small group sessions at entry, end of second semester and mid of fourth semester. Attitude scale and questionnaire will be distributed at these sessions or through campus mail. Withdrawal feedback sheet will be mailed at end of second and third semesters.*

Short-Range Student-Centered Objectives

OBJECTIVES	EVIDENCE
Students will achieve a minimum of tenth grade reading level and/or increase reading level during first semester.	*Criterion test score-10.0 and above on Nelson Denny.* *Classwork and class examinations.* *Teacher judgment.* *Other test scores.*
Students will demonstrate effective note-taking techniques.	*Competency performance: one standard instructional activity of simulated note-taking.* *Teacher judgment.* *Classwork.* *Instructional quizzes.*
Students will demonstrate the ability to write an acceptable essay.	*Competency performance on pre-post writing exercise.* *Teacher judgment.* *Classwork.* *Instructional quizzes.*

STANDARDS	SOURCES/PROCEDURES
One hundred percent will attain a 10.0 reading level and/or increase one level after one semester of reading instruction.	*Reading staff will administer Nelson-Denny during the final week of instruction to obtain criterion score. Other evidence will be collected at entry, on-going and exit in order to make pass-fail-recycle judgment.*
Seventy-five percent will attain a satisfactory competency level at end of one module of instruction.	*Writing staff will administer the simulation activity and judge performance at the conclusion of the instructional phase of note taking. Other evidence will be collected on an on-going basis in order to make the pass-fail-recycle judgment.*
One hundred percent will attain a satisfactory competency level at end of one semester of instruction.	*Writing skills staff will judge a brief written essay during the first and last week of instruction for evaluation. Other evidence will be collected on an on-going basis in order to make the pass-fail-recycle judgment.*

OBJECTIVES	EVIDENCE
Students will demonstrate an understanding of techniques used in making decisions.	*Performance in "choice" situations.* *Staff judgment.* *Participation in group counseling mini-sessions.*

STANDARDS	SOURCES/PROCEDURES
One hundred percent will be able to describe a decision process and seventy percent will have identified a tentative career goal at conclusion of mini-sessions.	*On an on-going basis staff members will note performance of students placed in situations of "having to decide". Judgment will be made as to need for counseling or other supportive activity.*

Program-Related Objectives

OBJECTIVES	ACTIVITIES
To integrate counseling services with developmental program.	*Small group counseling mini-sessions for personal decision-making skills.*
To support and cooperate with admissions staff in recruitment-selection procedures.	*Combined staff sessions at beginning and end of each semester.* *On-going sharing of feedback data.*
To improve awareness and program image with college generally.	*Combined staff mini-sessions.* *Supportive services relative to courses of study on an on-going basis such as textbook readability, conferences on student problems, in-class units on skills.*

EVIDENCE	SOURCES/PROCEDURES
Attendance, number of sessions, student feedback, staff feedback.	*Counselors and director will maintain a record of attendance and obtain feedback through oral and written activities throughout each semester.*
Cooperative approach to admissions and selection. *Degree of mutual sharing and acceptance.* *Student feedback after entry.*	*Director and staff will maintain on-going minutes and records of meetings and documents.* *Staff will collect student feedback at beginning of semester.*
Reaction sheet. *Extent of use and request for supporti supportive services.* *Log of interactions and services.* *Faculty responses to opinionaire.*	*Director and staff will maintain records and minutes; and obtain feedback on an on-going basis.* *Administration will administer brief opinionaire to faculty near year end.*

OBJECTIVES	ACTIVITIES
To determine appropriateness of instructional materials.	*Obtain student and faculty feedback on reading levels, interest, relationship to college studies and career programs.*
To determine impact of skill areas to other courses and student attitude toward program and college.	*Design student reaction forms and test on sample of last year's students.*

EVIDENCE	SOURCES/PROCEDURES
Reaction sheets. Utilization of materials on request basis and in conjunction with courses. Recommendations received.	*Director and staff will collect feedback prior to spring recess. Records will be maintained by staff.*
Student reactions to questionnaires.	*Director and staff will administer, collect and analyze results and maintain data records.*

DEVELOPMENTAL STUDIES FOR OCCUPATIONAL STUDENTS:
POST-SECONDARY PROGRAMS

VEA-78-335-PS

PROJECT STAFF

LaVerna M. Fadale, Project Director
Gene M. Winter, Associate Director, CIOE
Roger Johanson, Research Assistant
Carol Adomiak, Secretary

Research Publication: 77-3 Addendum
September 1978

Funds for this project were provided by
Section 122(a) of the
Vocational Education Amendments of 1968
administered by the
New York State Education Department

Funding for this project was provided under PL-94-482 Title I, Vocational Education Subpart 3, Education Amendments of 1976, administered by the New York State Education Department.

ADVISORY COMMITTEE

Virginia Abrahamsen
Delhi Agricultural and Technical College
Delhi, New York

Stephen H. Adolphus
New York State Education Department
Albany, New York

David L. Bartlett
Ulster County Community College
Stone Ridge, New York

Grace E. Barton
Alfred Agricultural and Technical College
Alfred, New York

Larry Borzumato
Ulster County Community College
Stone Ridge, New York

Bruce Hilyard
Genesee Community College
Batavia, New York

ADVISORY COMMITTEE - *continued*

Nancy A. Hoddick
Albany, New York

George Howard
State University of New York

Roger Wingett
Jamestown Community College
Jamestown, New York

INTERIM PROEM

This monograph series focusing on post-secondary developmental programs for occupational education students, is completed with the addition of three topical areas:

Monograph #7: Program Cost Analysis
Monograph #8: An Approach to Staff Development
Monograph #9: Follow-Up Summary

Information has been collected during the third research cycle; a follow-up study of students and a state-wide program cost survey. The previous format of the series has been maintained for the additional monographs.

The project was supported through funding from the Grants Administration Unit, VEA #78-335-PS, New York State Education Department. The final cycle of effort was made possible by the continued cooperation and support of individuals and institutions (identified on the following page) that served as research sites in the follow-up phase. On behalf of the project staff we wish to express our sincere appreciation for their efforts.

A share of any credit rightfully belongs to those who have contributed to the activity but project staff accept full responsibility for any perceived shortcomings.

Dr. LaVerna M. Fadale
Project Director
Developmental Studies

COOPERATING SITES

Alfred Agricultural and Technical College
Alfred, New York 14802

Contact Person: Grace Barton

Delhi Agricultural and Technical College
Delhi, New York 13753

Contact Person: Virginia Abrahamsen

Jefferson Community College
Watertown, New York 13601

Contact Person: Carol Scanlon

Junior College of Albany
Albany, New York 12208

Contact Person: Debbie Paruolo

Queensborough Community College
Bayside, New York 11364

Contact Person: Sandra Seltzer

Ulster County Community College
Stone Ridge, New York 12484

Contact Person: David L. Bartlett
Larry Borzumato

Monograph #7

PROGRAM COST ANALYSIS

Developmental Studies

LaVerna M. Fadale 1978
ALL RIGHTS RESERVED

MONOGRAPH #7: PROGRAM COST ANALYSIS

Problems and Issues

There appears to be little potential for the expansion of developmental programs during these times of budget reductions and retrenchments. At the same time, increasing numbers of potential students; often termed non-traditional, are entering two-year colleges with individual needs for the kinds of support offered by developmental studies programs in order to succeed in their occupational programs. This apparent conflict demands careful consideration of program costs as part of the college budgeting system.

The basic motive for seeking cost analysis information is that financial information is necessary for most program management decisions. Evaluation efforts usually focus on educational objectives and program effectiveness questions. Cost-effectiveness analysis requires that expenditure information, or program costs, be linked with learner outcomes in order that at least two questions can be addressed: 1) Are we getting our money's worth; and 2) Would different expenditure patterns and amounts result in more desirable program results? As educational budgets continue to come under closer scrutiny, many developmental programs are being implicitly or explicitly categorized as high-cost efforts yet many program coordinators have had limited financial management responsibilities. It is our opinion that this fiscal information is needed by program managers in order to make program recommendations that are cost as well as educationally effective.

On many campuses the separation of financial and academic authority is a preferred administrative pattern. In a highly centralized decision-making context the charge to the program management level is essentially to do the best possible with the dollars that are allocated. In a more decentralized decision structure, the charge may be to consider alternative resource allocation patterns and

recommend the mix that will produce the most desirable results at the most reasonable expense. In either situation the developmental studies administrator/coordinator has need for detailed cost information, if not the authority to impact expenditures.

Background Information and Findings

In order to provide the most effective developmental studies programs relative to both cost and education, it is recommended that program cost information-seeking and analysis be an annual internal management activity and, as such, part of the total decision-making process relative to developmental programming. The project cost survey was undertaken to provide a data base for comparison to local costs and to suggest specific kinds of cost information that should be sought.

A program cost questionnaire was sent to the two-year institutions in New York State which offered developmental programs for post-secondary occupational education students. Items were designed to collect cost information deemed appropriate to the internal management and decision-making process. Personnel service data were requested on numbers and titles of professional staff, average salaries and percentage of time devoted to each component of the developmental program. The questionnaire also requested similar information for support staff (such as secretaries, tutors, aides) their average salaries, and percentages of time for each program component or activity. Realizing that physical plant maintenance and operation, facilities, administration, services such as recruitment, admissions and placement and library costs, are usually borne by the college and not usually included as direct expenses of the developmental program, we inquired as to whether or not this was true.

We found that in over 95% of the cases, the college did assume responsibility for these kinds of administrative, student services and maintenance operation costs.

A related question was asked to determine if developmental programs received a budget allocation for items such as supplies, telephone, postage or travel. In 79% of the cases it was indicated that the program did receive such a budget allocation. In the remaining programs these items were usually included as part of a dean's and/or department chairperson's budget or treated as a general institutional expense. Information on the number of students served, amount of credit for each course or component, and average annual expenditure for items such as instructional supplies and equipment was also collected.

The findings presented in this monograph are based on a usable response rate of 48%. We acknowledge that the data are in some cases best estimates rather than audited figures. However, we feel that the data are reasonably accurate for general illustrative purposes at this point in time. Barring major program changes or retrenchments, subsequent years' data will be slightly different but probably proportionately comparable.

For each of the responding colleges with credit-bearing developmental programs, a total program cost estimate per FTE student was calculated using 15 credit hours to represent a full-time student per semester. (If courses are not credit-bearing when program costs are considered, an estimate of contact hours divided by 15 provides approximate FTE data.) Comparable expenditures for the function of college-wide instruction and departmental research were compiled from SUNY data for these same colleges. Items such as administration, student services, employee benefits, plant maintenance and operation, and general institutional

expense were not included in the college-wide functional cost figure. Similarily these same items were excluded from the cost data for developmental programs. The total dollars per college was divided by the number of full-time equivalent students in order to obtain some basis for comparing costs of developmental and "regular" academic or career programs. Selected data from EOP programs at two-year colleges were also used to estimate an average EOP program cost.

Average Expenditure for Instruction by Full-Time Equivalent Student

Developmental Program Survey Data	-----	*$ 647 per FTE*
All programs for function of instruction and departmental research[1]	-----	*$1022 per FTE*
Average approved expenditure of community colleges for EOP students[2]	-----	*$1303 per FTE*

---

[1] *Data extrapolated from "Compilation of Statistical Data Concerning the Community Colleges of State University of New York", Office for Community Colleges, SUNY, Albany, NY, November 1977.*

[2] *Data extrapolated from "Educational Opportunity Program, Annual Report", Office of Special Programs, SUNY, Albany, NY, April 1977.*

The comparison of costs indicates that, at the institutions for which data were available, costs per FTE student in developmental studies are significantly less than the average cost per FTE for all program instruction and for approved EOP programs. It is likely that our survey data may be understated. If an upward adjustment of 25% is made on developmental program costs to account for understatement of total expenditures, and if it is assumed that many developmental students take only 12 rather than 15 hours (or a full FTE) requiring another 25% increase, the adjusted estimate becomes $1,013 per developmental FTE compared with $1,022 and $1,303. These data do not support a commonly held opinion that developmental studies is an inordinately high cost program area. The average approved expenditure per FTE student in community college EOP programs includes student financial assistance which tends to make those data higher than might be assumed.

Total program costs are useful in a gross comparative situation but programs vary in size and scope, and effectiveness is often component-specific if not student-specific. Cost data should be compiled for each of the components of the developmental program. Since the largest expenditure is normally for professional staff, the survey data on staff distribution by title by each program component is subsequently summarized. The "other" category includes titles such as librarian, lab and technical assistant, counselor, and coordinator. These data show a fairly well balanced staffing distribution, not unlike what might be expected for any program area.

Component Staffing by Professional Title

Component	Professor	Assoc. Professor	Asst. Professor	Instructor	Other
Reading	2	7	2	5	9
Study Skills	2	3	3	2	3
Writing	-	1	3	1	8
Developmental English	1	1	3	6	3
Math	-	5	3	3	2
Other	2	3	6	1	2
TOTAL	7	20	20	18	27
	7%	21%	21%	19%	32%

The collection of data concerning professional salaries and the staffing patterns allowed the calculation of the mean salary expense for each program component. Using headcount student information from the survey responses, an average professional salary expenditure per headcount student was calculated and summarized in the following table.

Component	Average Professional Salary Expenditure Per Student Headcount
Reading	$ 42.25
Study Skills	20.11
Writing	38.93
Developmental English	196.11
Math	63.91
Other	51.27

It is obvious from the chart that the cost per headcount student for developmental English is significantly higher than the other component cost data. This difference is primarily due to data from one institution's particular staffing configuration. The range of $40 to $65 per headcount student in reading, writing, math and other is more illustrative of reality than the $196 figure for Developmental English. The study skills average amount tends to be lower and may be underestimated since many colleges include study skills with other subjects which makes an accurate cost break-out difficult to estimate.

Another expenditure item included in cost data is support staff expenses (i.e. secretarial, student employees). In the majority of survey cases, the secretarial salary expenditure was given for the total program and had to be estimated by workload or proportion of cost to each program component.

Respondents were also asked to assume that a person at another college wanted to initiate a new developmental program identical to theirs and requested an estimate of the minimum start-up costs for instructional equipment. Although start-up estimates for a program identical to that of the responding institution varied widely, approximately 25% felt that they could begin for $1 to $2 per headcount student. About 50% felt that they would need between $10 and $20, and another 25% felt that they would need from $100 to $200 per headcount student. The kinds of equipment that were seen as initially necessary were recorders, cassettes, and video equipment. High priority supply items were filmstrips, slides, software reading materials, film and facilities to reproduce materials.

The respondents were also asked to assume an increase of 10% in the developmental program budget and state how it would be used. The items mentioned most frequently were various instructional software and peer tutors. If the program were to be decreased by 10%, over three-fourths of the respondents indicated that it would be absorbed by a reduction in the purchase of supplies and instructional materials.

Recommendations and Implications

The previous section has summarized findings to provide a base for comparison by local institutions. In order to facilitate analysis of program costs, a suggested strategy is presented in a step-by-step approach. Format examples completed with illustrative cost data are provided to lend structure and detail to the previous discussion. We hope the examples display the potential value of cost analysis as well as provide sample formats that will be adaptable to local program level staff use.

Sample Program Description

The College Learning Skills Center is the hub and headquarters of the developmental studies program. The Director of the Center administers the developmental studies program and also teaches four sections of a one-credit course in study skills. Three instructional staff members and a counselor, all of whom have some regular department assignments, comprise the program staff. The Center secretary serves all components of the program. The Director and the Counselor supervise a peer tutoring program that is supported from the general college budget and primarily serves general college students. In addition to the duties directly associated with the developmental program, the Center Director and secretary provide short-term assistance in basic academic skills to all students who come to the Center voluntarily or by faculty referral.

The program is summarized as follows:

English--8 sections, 15 students each, 3 credit hours.
Reading--6 sections, 10 students each, 2 credit hours.
Math--4 sections, 15 students each, 3 credit hours.
Personal Development--2 sections, 15 students each, 2 credit hours; peer tutoring training and supervision.
Center--assistance in all skills, referral and walk-in students; administer total program, coordinate peer tutoring. Teach study skills--4 sections, 15 students each, 1 credit.

---

1. The program staffing and salary allocations are presented in a suggested format on page 11.

Figure 1
Developmental Program Effort and Salary Allocations

Name-Title	Annual Salary*	FTE	Program Element	Dev. Budget	College Budget
A. Jones-Director	$20,000	.75	Center	$15,000	-
A. Jones-Director		.25	Study Skills	5,000	-
B. Smith-Professor	18,000	.80	English	14,400	-
C. White-Assistant Professor	14,000	.40	Math	5,600	-
D. Brown-Instructor	13,000	.60	Reading	7,800	-
E. Green-Counselor	16,000	.40	Personal Dev.	6,400	-
F. Black-Secretary	7,000	1.00	All Components	3,500	-
			Center	3,500	-
Peer Tutors	10 x 360	-	Center	-	3,600
TOTALS		4.20		$61,200	$ 3,600

*Does not include employee benefits.

II. Cost of each program component, the second step in organizing the program financial information, is presented in the suggested format in Figure 2 on page 13.

III. By adding student credit hour output to the component cost data, comparisons can be made between each component and for the total workload output of the Center by using estimated general student contact hours for non-credit courses and activities as a proxy for student credit hours. The format for this third step is summarized in Figure 3 on page 14.

Figure 2
Program Component Analysis

	CA*	R*	SS*	E*	PD*	M*	T*[1]
Professional Salaries	$15,000	$7,800	$5,000	$14,400	$6,400	$5,600	$54,200
Secretarial Salaries	3,500	700	-	1,400	700	700	7,000
Communication	400	80	80	80	80	80	800
Supplies	600	200	200	500	100	100	1,700
Equipment	300	300	-	-	-	-	600
Other	300	-	100	100	-	-	500
TOTALS	$20,100	$9,080	$5,380	$16,480	$7,280	$6,480	$64,800

CA* = Center Administration
R* = Reading
SS* = Study Skills
E* = English
PD* = Personal Development
M* = Math
R* = Totals

[1] peer tutoring amount not included.

Figure 3
Component Costs Per FTE Student

Program Component	Component Total Cost	Student Credit Hours	FTE Dev. Students	Cost Per FTE	Non-Dev. Student Contact Hours	Estimated Non-Dev. FTE
	1	2	3*	4	5	6*
Reading	$ 9,080	120	8	$ 1,037	90 walk-ins and referrals	6
Study Skills	5,380	60	4	1,345	150 walk-ins and referrals	10
English	16,480	360	24	686	-	-0-
Personal Development	7,280	60	4	1,820	60 (peer tutors)	4
Math	6,480	180	12	540	-	-0-
Instructional Sub-Total	$44,700	780	52	$ 721	300	20
Administration and Coordination	$20,100					

From these data the total cost per FTE student is calculated as follows:

Total Center Costs = $64,800
Dev. FTE = 52
Non-Dev. FTE = 20 (300 hours ÷ 15)
Total Cost Per FTE = $900 (64,800 ÷ 72)

*column 2 ÷ 15 = column 3
column 5 ÷ 15 = column 6

IV. The final step is relating educational output or effectiveness to each component and the total program. We are unaware of any "best" format but feel that professional judgments stemming from evaluative data and intimate knowledge of the program activities will dictate the most appropriate approach. The following questions and observations are presented based on the hypothetical cost data and assumed educational output.

Analysis Examples

Question: Why does English and Math appear to be least costly? (cost per FTE column, figure 3).

Possible Responses: 1) Personal Developmental and Study Skills are underenrolled. If so, why and what actions can/should be taken?

2) The faculty effort percentage is too high for Personal Developmental and Study Skills. If so, they should be corrected or additional efforts made to add sections to the instructional load.

3) When the non-developmental student contact hours, peer tutoring and other administrative responsibilities are taken into account, the cost/workload discrepancy is lessened.

Question: Since our evaluation evidence indicates a strong correlation between grades in developmental English and second year student grade-point-average, how might we reallocate the program resources to strengthen the developmental English experience?

Possible Responses: 1) Additional supply and equipment money might be reallocated from the Center's amount if that kind of enrichment is needed.

2) Part of the Director's FTE could be added to English (the Director teaching one section or added lab periods) in order to reduce class size and allow for more individualized attention.

Potential Impact

Most forecasters agree that the demand for existing educational dollars will continue to grow and the competition for them will increase. We are suggesting that one of the best defenses against this kind of situation is the ability to demonstrate the cost-effectiveness of your program. The educational effectiveness of developmental programs has, in some instances, been well documented at selected sites. During the course of this project we have found that, in general, the validity of developmental education programs has been established locally but the cost-effectiveness of the program remains a question that local personnel are only beginning to address. The first step is becoming aware of what the program actually costs in annual operating dollars. Linking the expenditures to each program component by FTE student allows for more accurate internal comparisons

in terms of other academic programs and the college's priorities. What we have suggested in this monograph is a standard approach that we feel, if implemented, can be useful to developmental studies personnel in making operational decisions, and planning for longer-range program decisions. We recognize that there are a variety of financial reporting forms and formats that are required for local and state program purposes. The forms included in this monograph are not sacred. The kinds of cost information are probably already reported elsewhere. We are suggesting that compiling financial information in a fashion most appropriate to the local program will enable the linkage of cost and effectiveness to be examined and more knowledgeable program decisions to be made than would be possible with educational effectiveness measures alone.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Is there awareness of actual program costs?*

2. *Are learner outcomes linked to developmental program costs?*

3. *Are costs, both for total program and specific components, a consideration in making program-related decisions and in internal management?*

Monograph #8

AN APPROACH TO STAFF DEVELOPMENT

Developmental Studies

© LaVerna M. Fadale 1978
ALL RIGHTS RESERVED

MONOGRAPH #8: AN APPROACH TO STAFF DEVELOPMENT

Problems and Issues

This monograph series addresses problems and issues and presents research results organized by six functional categories: recruitment and selection, diagnosis and prescription, programming, staffing and facilities, evaluation and management, and cost. Each monograph concludes with guide questions designed for local program standards. This monograph outlines an approach for using the monographs as a resource in staff development activities with colleagues or other personnel. The approach is suggested only --- its greatest value may be in terms of other adaption ideas it generates. The described process was presented at a series of workshops and recommendations and critiques received from workshop participants have been incorporated in the described approach.

Recommendations and Implications

The guide questions at the end of each monograph can be rephrased as ideal statements that point toward program standards that were verified during the research phase of the project. Local use as program criteria may require adaption in order that the statements accurately reflect the individual program characteristics and constraints. The adaption process involves three basic alternatives: 1) acceptance of the statements as written; 2) adding to the statements as written; 3) subtracting from the statements as written. The modified statements become a set of criteria that are based in comprehensive research but are unique to the local program.

The following format serves as a guide for the adaption process. The adaption process or the consideration of the utility of the monograph statements to a local program, is in itself a staff development activity as well as being a basis for additional program and staff development work.

The Adaption Process

For each of the six functional categories the guide questions have been reworded as ideal statements or operating standards followed by sections for reference from the appropriate monograph(s). The guide to the utility consideration process consists of questions reflecting the three basic alternatives in adaption. The process is outlined for each category as follows:

Recruitment and Selection

A. Ideal Statements or Program Operational Standards.

1. Testing for selection and placement reflects locally determined threshold levels.

2. The selection process includes counseling and/or advisement to complement high school records and test scores.

3. The selection process includes an element of self-selection and personal choice relative to participation in developmental studies.

4. Locally determined threshold levels are continuously evaluated.

5. Scheduling involves sufficient flexibility to allow a change of competency level class subsequent to the initial weeks of instruction.

6. *There is opportunity for attention to individuals who are members of a targeted group within the developmental effort.*

7. *Developmental staff, admissions staff and curriculum personnel are involved in selection and recruitment as well as exit processes.*

8. *Counseling, guidance, and advisement are on-going processes and help individuals focus on potential areas of success.*

B. *Resources.*

1. *Monograph #1, Overview: Research Results, pages 3, 7, 9.*

2. *Monograph #2, Recruitment and Selection, pages 1 through 5.*

3. *Monograph #6, Evaluation and Management Information System, pages 7 through 13.*

4. *Monograph #9, Follow-Up Summary, pages 1 through 6.*

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with <u>our</u> local program in mind,*

1. *Do you disagree with any of the statements?*

   Yes ___ No ___

   If yes, identify and explain why you disagree.

   _____

   _____

2. *Are there other statements that you believe should be included?*

Yes ___ *No* ___

If yes, please list.

SAMPLE:

1. Developmental education is made available to the community.

3. *Rephrase the operational standard statements as revised for our local program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				*Not Acceptable*
SAMPLE:	5	4	3	2	1
Testing for selection and placement reflects locally determined threshold levels.	5	(4)	3	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

Diagnosis and Prescription

A. Ideal Statements or Program Operational Standards.

1. A variety of valid entrance and exit measures, dependent upon program requirements, are established.

2. Students and appropriate staff members are aware of competency levels and expectations held for successful completion of the developmental courses.

3. Individualized diagnostic procedures are integral with the prescriptive process.

4. Appropriate staff members such as developmental personnel, counselors, faculty advisors are involved in the diagnostic/prescriptive procedures for developmental students.

5. The diagnostic process provides the inputs necessary for individual prescription.

6. Program scheduling has sufficient flexibility to allow implementation of the prescription.

7. Counseling and advisement are functional parts of the diagnosis and prescription process.

8. Upon completion of diagnosis and prescription, a primary goal is to provide feedback to students, with secondary responsibility to provide feedback to cooperating departments.

B. *Resources.*

1. *Monograph #1, Overview: Research Results, pages 3 through 9.*

2. *Monograph #3, Diagnosis and Prescription, pages 1 through 5, 7 through 15.*

3. *Monograph #6, Evaluation and Management Information Systems, pages 7 through 13.*

4. *Monograph #9, Follow-Up Summary, pages 1 through 6.*

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with our local program in mind,*

1. *Do you disagree with any of the statements?*

   Yes ___ *No* ___

   If yes, identify and explain why you disagree.

   _____

   _____

2. *Are there other statements that you believe should be included?*

   Yes ___ *No* ___

   If yes, please list.

   _____

   _____

   _____

   _____

3. *Rephrase the operational standard statements as revised for <u>our local</u> program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				Not Acceptable
<u>SAMPLE</u>:	5	4	3	2	1
Counseling and advisement are functional parts of the diagnosis and prescription process.	5	4	(3)	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

_____

_____

_____

<u>Programming</u>

A. Ideal Statements or Program Operational Standards.

1. *The developmental program emphasizes the skills of reading, writing, listening, study skills, career-personal decision-making and math with content based on career and/or academic course requirements.*

2. *The developmental program has identifiable goals, objectives and outcomes and carries a positive connotation to students and faculty generally.*

3. *The institution has sought to establish credit status for some part of the developmental offerings; and this status is clearly communicated to potential students.*

4. *Developmental offerings have flexibility in scheduling in order to provide alternatives for participation, or periodic requests for help by students.*

5. *Class size is appropriate for individualized instruction as needed.*

6. *Support services of counseling and tutoring are continuously available and managed by professional staff.*

7. *The program process incorporates a follow-up procedure and allows students to drop-in and drop-out after formal completion.*

8. *The institution examines its total role relative to the needs of non-traditional students.*

B. *Resources.*

1. *Monograph #1, Overview: Research Results, pages 1, 7 through 9.*

2. *Monograph #4, Programming, pages 1 through 9.*

3. *Monograph #6, Evaluation and Management Information Systems, pages 7 through 13.*

4. *Monograph #7, Program Cost Analysis, pages 1 through 17.*

5. *Monograph #9, Follow-Up Summary, pages 1 through 6.*

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with <u>our</u> local program in mind,*

1. *Do you disagree with any of the statements?*

   Yes ___ No ___

   If yes, identify and explain why you disagree.

   _____

   _____

2. *Are there other statements that you believe should be included?*

   Yes ___ No ___

   If yes, please list.

   _____

   _____

   _____

   _____

3. *Rephrase the operational standard statements as revised for our local program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				Not Acceptable
SAMPLE:	5	4	3	2	1
Class size is appropriate for individualized instruction as needed.	5	(4)	3	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

_____

_____

_____

Staffing and Facilities

A. *Ideal Statements or Program Operational Standards.*

1. *Staff members have demonstrated ability in individualized instructional techniques; demonstrated interest, experience expertise and credentials in the developmental area; and hold college rank and status.*

2. *Staff schedules allow for and encourage interaction and on-going cooperation with other faculty members.*

3. *Opportunities for dual staffing assignments are available.*

4. *Physical facilities are centralized and easily accessible to students.*

5. *Classrooms are physically flexible thereby not restricting a change of teaching styles.*

B. *Resources.*

1. *Monograph #5, Staffing and Facilities, pages 1 through 6, 8.*

2. *Monograph #6, Evaluation and Management Information Systems, pages 7 through 13.*

3. *Monograph #9, Follow-Up Summary, pages 1 through 6.*

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with our local program in mind,*

1. *Do you disagree with any of the statements?*

Yes ___ *No* ___

If yes, identify and explain why you disagree.

_____

_____

2. *Are there other statements that you believe should be included?*

   Yes ___ *No* ___

   If yes, please list.

   _____

   _____

   _____

   _____

3. *Rephrase the operational standard statements as revised for <u>our local</u> program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				*Not Acceptable*
SAMPLE:	5	4	3	2	1
Physical facilities are centralized and easily accessible to students.	5	(4)	3	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

   _____

   _____

   _____

Evaluation and Management

A. Ideal Statements or Program Operational Standards.

1. Evaluation of developmental program relates to division, department and/or college assessments.

2. A definition of program and effectiveness exists in sufficient specificity to guide evaluation of identifiable program standards as are suggested throughout this monograph series and by the adaption process outlined in this monograph.

3. The decisions to be made and the questions asked about developmental programs by faculty, administration and students are known and identified.

4. Program evaluation criteria are identified in terms of both ideal and local standards, and are examined periodically by staff and administrative personnel.

5. Evaluation of developmental program is comprehensive; including impact, cost, carry-over, effectiveness and longitudinal follow-up dimensions.

B. Resources.

1. Monograph #1, Overview: Research Results, pages 3 through 10.

2. Monograph #6, Evaluation and Management Information Systems, pages 1 through 5, 7 through 16.

3. Monograph #7, Program Cost Analysis, pages 1 through 17.

4. Monograph #9, Follow-Up Summary, pages 1 through 6.

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with <u>our</u> local program in mind,*

1. *Do you disagree with any of the statements?*

   Yes ___ No ___

   If yes, identify and explain why you disagree.

   _____

   _____

2. *Are there other statements that you believe should be included?*

   Yes ___ No ___

   If yes, please list.

   _____

   _____

   _____

   _____

3. *Rephrase the operational standard statements as revised for <u>our</u> <u>local</u> program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				*Not Acceptable*
<u>SAMPLE:</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
Evaluation of developmental program is comprehensive; including impact, cost, carry-over, effectiveness and longitudinal follow-up dimensions.	5	(4)	3	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

_____

_____

_____

Program Cost Analysis

A. *Ideal Statements or Program Operational Standards.*

1. *Actual program costs, for both total program and specific components, are integrated with internal management and in making program-related decisions.*

2. *Developmental program assessments link cost and educational effectiveness.*

3. *Appropriate staff and administrative personnel are aware of actual developmental program costs.*

B. *Resources.*

1. *Monograph #6, Evaluation and Management Information Systems, pages 1 through 5, 7 through 16.*

2. *Monograph #7, Program Cost Analysis, pages 1 through 17.*

3. *Monograph #9, Follow-Up Summary, pages 1 through 6.*

C. *Directions: After reading the ideal statements and reviewing if necessary the contextual references with our local program in mind,*

1. *Do you disagree with any of the statements?*

   Yes ___ *No* ___

   If yes, identify and explain why you disagree.

   _____

   _____

2. *Are there other statements that you believe should be included?*

   Yes ___ *No* ___

   If yes, please list.

   _____

   _____

   _____

   _____

3. *Rephrase the operational standard statements as revised for <u>our</u> <u>local</u> program (refer to A and C, #1 and 2) and rate each adapted statement relative to its current status and acceptability.*

	Acceptable				*Not Acceptable*
SAMPLE:	*5*	*4*	*3*	*2*	*1*
Administrators and faculty are aware of actual program costs.	5	4	(3)	2	1

4. *Which of these statements should be considered as a basis for staff improvement activities? List in terms of priority:*

   _____

   _____

   _____

Implications

Statements approximating program standards have been under development throughout the three-cycle project. Research findings verified by inputs from field personnel have identified criteria or standards for developmental programs to serve as the *ideal* with which the actual or real of the local situation can be compared. The existence of these ideal standards and a framework for adaption of local standards can help local staff address program improvement through a staff development mode that recognizes local professionalism and expertise. Alternative approaches to adaption are presented in the Appendix.

The adaption process and alternatives, with content verified by research findings, have potential to serve as a base for staff development activities with both developmental and non-developmental personnel. These activities may be approached through workshops, small group efforts, readings, brain-storming or integrative assignments.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Do staff development activities include coordinated and inter-departmental efforts as well as department-specific and internal efforts?*

2. *Do the outcomes of staff development activities have utility for planning, programming, evaluation and instruction of developmental efforts?*

3. *Are staff development activities scheduled at times convenient for the greatest number of involved personnel?*

4. *Is there a perceivable value placed on staff development activities by the local institution?*

5. *Are there sufficient opportunities for inputs and suggestions by local personnel to staff development efforts?*

APPENDIX

In looking to the best adaption process to local programs there may be approaches, other than the outlined format, that may be equally useful. One alternative begins with the ideal statement as written and moves to identification of a specific ideal statement related directly to the local program. Once local criteria have been delineated the subsequent step is to consider the action or activities to be undertaken. After determination of what is to be done, the next step is to identify the personnel who will undertake the action...in essence - the actors. Having identified the general ideal, the specific local ideal, the action to be undertaken and the actors responsible, the final step becomes analysis and results. The approach is summarized in sequential steps as:

1. *Ideal Statement:* - - - - - - - - - - - - - - - - - -
   -

2. *Local Program Ideal:* - - - - - - - - - - - - - - - -
   -

3. *Action/Activities:* - - - - - - - - - - - - - - - - -
   -

4. *Actors:* -
   -

5. *Analysis and Results:* - - - - - - - - - - - - - - - -
   -

A third alternative uses the criteria statements as given (or with slight modification) to define an area within the local program. Process objectives and/or activities from the program which are relevant to the selected standard are delineated in a second category. The third step may be an interim category if it identifies the outcomes of program objectives or activities. In program evaluation, it becomes the evidence that is being sought. Once the standards have been identified, local objectives or activities are incorporated to meet that standard, and outcomes or interim outcomes or evidence have been identified or collected, a final category is judgments and recommendations. A sample of this alternative is outlined on page 22.

RBE PROGRAM EVALUATION FORM: CONCISE OUTLINE

PROGRAM STANDARDS	PROCESS OBJECTIVES OR ACTIVITIES	OUTCOMES OR EVIDENCE OR INTERIM OUTCOMES	JUDGMENTS AND RECOMMENDATIONS
Scheduling includes sufficient flexibility to allow a change of competency level class in freshmen English subsequent to the initial weeks of instruction.	1. *To obtain administrative clearance.* 2. *To determine criteria for faculty recommendations of schedule changes.* 3. *To communicate change decision criteria to English faculty and students.* 4. *To have faculty review of changes in group sessions.* 5. *To implement rescheduling.*	*Administrative clearance denied.* *Majority of faculty begin to develop individualized instruction units.*	*Faculty committee formed to investigate greater scheduling flexibility for next year with administration and those responsible for scheduling.*

The third alternative may be more useful when the major focus is evaluation. The adaption process highlighted in this monograph, plus the second alternative are not as oriented to evaluation. They may be used to collect the kinds of information needed in making curriculum decisions or procedural adjustments. In reality these too are part of the total evaluation process but may not be so considered at any given time.

Monograph #9

FOLLOW-UP SUMMARY

Developmental Studies

© LaVerna M. Fadale 1978
ALL RIGHTS RESERVED

MONOGRAPH #9: FOLLOW-UP SUMMARY

Introduction

This research effort has delineated success predictors of occupational students enrolled in developmental programs. These factors may be generally categorized as student-related and program-related. The student-related category includes both cognitive and affective factors. The program category encompasses program components or content factors and program characteristics such as flexibility, individualization and a prevailing supportive environment. The longitudinal follow-up phase of research was designed to verify findings of the previous two phases.

Outcomes and Findings

Student Variables. Success has been defined in this project as the eligibility to continue in the selected career or academic program. Using this criterion at the end of the second phase, the respondents were divided into two groups; successful and non-successful. For purposes of analyses, this grouping has been maintained throughout the follow-up phase. The total student sample tended to be older than has been traditional for students entering two-year colleges. As a total group a majority of these non-traditional responding students did not change their major course of study while enrolled in college. These respondents as a group viewed commitment as more important during this follow-up time-frame than previously when all were enrolled in college. A majority of the successful students indicated that program completion and employment in a program-related area had increased in value to them since entering college. The personal commitment to long-range and short-term goals also remained strong for the successful students during this longitudinal phase. The longitudinal effort

reaffirmed program and career commitment factors as significant success indicators. In general, goal achievement became more important to these non-traditional students while peer acceptance and factors associated with personal gratification became less important.

In the affective domain, the previous findings relative to importance of selected values were upheld by longitudinal data. Achievement, orderliness, goal orientation, and benevolence remained as critical success factors during this follow-up phase. The successful students tended to value practical-mindedness to a significantly greater extent than did the unsuccessful students. However lesser importance was attached to leadership, conformity, and variety than had been found previously.

The unsuccessful students, those who were no longer enrolled in college, indicated that withdrawal had been due to a variety of reasons, but most frequently identified were dissatisfaction with program or personal academic records, and personal reasons such as family, finances, and health. The majority of these individuals had conferred with college personnel before withdrawal; and tended to feel that given the identical situation, the same decision would be repeated. The majority of this group of respondents tended to be employed (27.8%), seeking employment (38.9%) or in attendance at another institution (11.1%). A larger percentage of unsuccessful than successful students indicated plans to continue academic work or training at some point in the future. This difference may reflect a personal desire of the responding unsuccessful students to eventually overcome whatever stigma they associate with academic failure or incompleteness of a task undertaken. In general, however, little uncertainty or indecision relative to future plans was in evidence for either group.

These results suggest that the definition of "success" should be carefully reconsidered when doing follow-up studies of developmental programs for occupational students. Our definition was arbitrary and purposefully restrictive to academic success at the college of entrance. The longitudinal information indicates that most "unsuccessful" students become employed (a goal of vocational education), or attend other colleges after their "non-success". We feel the project definition of success did serve as a necessary criterion indicating performance in a particular situation at the time of investigation.

Program Variables. Survival skills remain basic to success. Reading, study skills and math had been taken by a majority of respondents. In rating the carry-over or impact of the various program components, successful students identified reading as having greatest impact. In comparison, unsuccessful students perceived study skills as the component with most carry-over. This reinforces the outcome of the second phase of research in which the reading stanine emerged as a valid and constant success predictor.

Support and concern, by both the institution generally and the faculty specifically, were perceived as essential to satisfactory completion of career or academic programs. Faculty and/or counselor advisement plus a counseling dimension were identified as contributing to achievement or program completion. Flexibility in course scheduling and opportunity for a degree of personal choice were program characteristics that students continued to perceive as important.

Potential Alternatives and Impact

Since developmental studies programs are by nature preparation for subsequent academic endeavors, information collection activities of a follow-up nature are required to determine real program impact. Within the broad rubric of "follow-up", we recommend attention to three specific dimensions:

1) Follow-up assessments that focus on short-range success; student progress in courses from which specific carry-over is expected, such as math and English, and general student attitudes and study habits in the semester immediately following the development experience.

Specific follow-up inquiries can be directed toward determining the specific carry-over of reading, math, writing, developmental English or study skills to selected subjects and courses. Follow-up studies can also provide evidence to support and adjust developmental program exit criteria (which we have previously recommended as a program standard) --- such as reading skill level.

2) Follow-up of developmental students relative to success in completion of selected career programs.

Group success is often estimated by persistence or retention rate. A general success criterion for developmental students is the overall retention rate in comparison to other institutions and/or a control or other target groups within the institution. Our data for the sample of developmental students showed a mean retention rate of 58% during the second year of the study

Retention rate for all EOP students has been reported as 57%. Similarly the gross retention rate for community colleges in New York State can be extrapolated from statewide data as 53%.

3) Follow-up efforts specific to those development students who leave college including those who transfer to other institutions, acquire employment, withdraw for personal reasons such as health, financial or family, and those who fear failure or are academically dismissed.

Determination of the real or most important reasons for leaving has implications for recruitment and admission practices, student services, and both general college and developmental programming.

Using persistence or retention as a criterion of success may have limitations. In our follow-up effort many students categorized as unsuccessful by the project's definition of success have attained employment or are continuing their education at other institutions. In many ways they had used the two-year college experience to explore educational and career goals and apparently made adjustments in vocational goals based on the experience. Historically this has been one of the missions of the community college but all too often leaving college is also interpreted as a "non-success" for the college and the program. More detailed follow-up information could prove very useful in interpreting persistence rates and arriving at local consensus on success criteria.

Follow-up data such as these can provide the hard evidence necessary in today's competition for program dollars by quantifying and promoting awareness of the successful impact of developmental efforts. These contribute to a more positive image for developmental programs. An image of effectiveness and success in turn tends to encourage fiscal investment by decision-makers ---the perpetual circle of cause and effect.

Throughout the research effort we have attempted to identify ingredients that are more important than others to success. It is acknowledged that the mix and amount of these ingredients is dependent on local programs, availability of funds, institutional commitment and policies, and that it becomes the combination of available factors at each situation that will decide the eventual attainment of success. We believe that developmental personnel at each institution are capable of meeting these challenges that lie ahead.

GUIDE QUESTIONS FOR CONSIDERING PROGRAM STANDARDS

1. *Are follow-up studies an on-going component of local program assessment?*

2. *Does the follow-up component address short-range goals, long-range goals, skill carry-over to courses and program requirements, and focus on students who withdraw and/or leave as well as "program-completers?"*